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10 George Street
Lowell, MA 01852

EXAMINER

PATEL, VISHAL A

| ART UNIT | PAPER NUMBER |
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3676

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,562

Applicant(s)

HAYWARD, PHILLIP FIELDS

Examiner

Vishal Patel

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-- Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should

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be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

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- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Objections

1. Claim 43 is objected to because of the following informalities: line 1, "the or each".

This limitation should be changed to "each" or some other limitation. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 36 is rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a clear asserted utility or a well established utility.

Claim 36, “the at least one gaiter may be formed from a synthetic rubber compound formulated to provide a minimum stretch of 550% at break”, this limitation is unclear since applicant has failed to disclose a particular material or a material that can perform this (meaning that the applicant has not claimed a particular neoprene rubber compound that is 550% at break).

Claim 36 also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a clear asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 27-47 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 27-47 depend from canceled claims 1 or 2. For the examination purpose the claims will be dependent from independent claim 25.

Claim 44, line 3, “and/or”, this language makes the claim indefinite.

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6. Claim 38 recites the limitation "gaiter rubber" in line 6. There is insufficient antecedent basis for this limitation in the claim.

7. Claims 32, 33 and 35 recite the limitation "the wall" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 25-32, 34, 36-37, 39-40, 42-45 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayward (WO. 97/26473).

Hayward discloses a method of installing a gaiter around a joint defined between joint members (bellows being connected to a universal joint, see abstract) the method comprising the steps of:

providing a range of gaiters (range provided by gaiter in figure 1), in which each end portion of at least one gaiter of the said gaiter range incorporates a respective single annular fitting section or channel (channels 21 or 31 or 41 or 51), for use with a range of joints of different dimensions, the range of joints being greater than the range of gaiters and at least some of the gaiters in the said gaiter range being stretchable to fit two or more joints of the said joint range so the said joint range can be accommodated by the range of gaiters wherein a gaiter is selected from the gaiter range to fit a particular joint (page 9, lines 5-9, "These sections 18, 19 provide for attachment of different sizes of shaft (by cutting away section 19 if necessary)

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although alternatively a single section made from rubber of sufficient flexibility to be stretchable over different shaft sizes may be used”);

Regarding claims 26-32:

a method of installing a gaiter around a joint defined between joint members the method comprising the steps of providing a range of gaiters (page 9, lines 5-9), of the kind having a tubular body part (part that is attached to 30 and 17) and opposite end portions each tapered in a direction away from the body portion (opposite end portions taper, page 6, lines 20-22), for use with a range of joints of different dimensions, the range of joints being greater than the range of gaiters and at least some of the gaiters in the said gaiter range being stretchable to fit two or more joints of the said joint range so the said joint range can be accommodated by the range of gaiters wherein a gaiter is selected from the gaiter range to fit a particular joint (page 9, lines 5-9);

each joint is defined between first and second members and each gaiter of the said range of gaiters comprises a flexible tubular body having first and second end portions and a central portion therebetween the said end portions being configured for secure attachment to respective first and second joint members (joint 30 and 17 are connected to the gaiter);

each joint is defined between first and second members and each gaiter of the said range of gaiters comprises a flexible tubular body having first and second end portions and a central portion therebetween the said end portions being configured for secure attachment to respective first and second joint members (gaiter 10 that is conical is secured to 40 and 17);

each gaiter incorporates a central portion having folds therein to permit axial extension of the gaiter body (folds 24 permit axial extension of the gaiter body);

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the gaiter range includes at least one gaiter having a plurality of seating channels at one or each end portion (end portions 23 or 40-42);

at least one gaiter of the gaiter range is dimensioned to fit exactly, without any substantial stretching of the gaiter, one or more of the range of joints whilst also being stretchable to fit other joints in the joint range (end of gaiter having to be fitted on a dimension joint that has exact dimension of the gaiter end will not stretch substantially);

the wall of said at least one gaiter is configured and dimensioned to provide the requisite stretch characteristics for a given range of joint member dimensions (the gaiter wall has dimension characteristic for a given range of joints);

Regarding claim 34 and 36:

the said at least one gaiter has stretch characteristics to accommodate the process of fitting the gaiter (page 9, lines 5-9);

the said at least one gaiter may be formed from a synthetic rubber compound (page 8, lines 2-3) formulated to provide a minimum stretch of 550% at break (since the gaiter is made from synthetic rubber as claimed by the applicant the 550% at break is also disclosed by Hayward);

Regarding claims 37, 39-40 and 42-45:

the said at least one gaiter has stretch characteristics to accommodate prolonged installation in position about a joint;

at least some of the gaiters in the said gaiter range are formed from a synthetic rubber compound which is formulated so that the gaiter is also compressible (able to compress) to fit

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two or more joints of the joint range (since the gaiter is made from synthetic rubber as claimed by applicant, it is able to compress);

one or both end portions of the said at least one gaiter of the gaiter range are radially compressible (since the gaiter is made from synthetic rubber as claimed by applicant, it is able to compress);

the said one or both end portions are radially compressible, such that the compressed end portion and, in particular, the pertaining fitting section retains a substantially circular cross-section (this is the case since the material of applicant is disclose by Hayward);

each gaiter of the range is stretchable in all directions, and is at least stretchable longitudinally and transversely relative to the longitudinal axis of the gaiter (page 9, lines 5-9);

the said end portions of one or more gaiters of the gaiter range incorporate one or more internal or external ribs or beads (ribs 25 or beads at the end of 23) which extend wholly or partially around the circumference of a respective end portion of the said one or more gaiters;

the wall thickness of the gaiters in the gaiter range is constant (wall thickness are uniform of the gaiter as much as claimed by the applicant);

Regarding claim 47:

the gaiter is stretchable to fit two or more joints of a joint range (page 9, lines 5-9).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 35 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward in view of Lammin (GB. 2,320,067).

Hayward discloses the gaiter to have a thickness but fails to disclose the thickness to be 2mm. Lammin discloses the wall thickness of the bellows being 2mm (page 5, lines 30-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the thickness of the gaiter to be 2mm as taught by Lammin, to provide a specific flexibility (since thickness and flexibility as related as if a piece is thick than less flexibility and vies versa, evidence of this is shown by Gratziani).

Regarding claim 33:

Hayward and Lammin disclose the claimed invention except the thickness to be 3mm. Discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of choice in design. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the thickness to be 3mm as a matter of design choice.

12. Claims 33 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward in view of Gratziani (US. 5,222,466).

Hayward discloses the gaiter to have a thickness but fails to disclose the thickness to be 3mm. Gratziani discloses the wall thickness of the bellows being to be varied so as to achieve a specific flexibility (column 6, lines 39-44). It would have been obvious to one having ordinary

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skill in the art at the time the invention was made to configure the thickness of the gaiter as taught by Gratziani, to provide a specific flexibility (see Gratziani).

Hayward and Gratziani disclose the claimed invention except the thickness to be 3mm. Discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of choice in design. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the thickness to be 3mm as a matter of design choice.

Regarding claim 46:

Hayward disclose the invention substantially as claimed above but fail to disclose one or more gaiters of the range incorporate a gaiter wall which varies in thickness to alter the flexing characteristics of the respective gaiter(s). Gratziani discloses the gaiter to be a constant thickness or varying thickness (column 6, lines 39-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the gaiter to be varying thickness as taught by Gratziani, to provide a specific flexibility (column 6, line 41-42 of Gratziani).

13. Claims 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward in view of IBM Technical Disclosure Bulliten, July 1984 (referred to as IBM).

Hayward disclose the invention substantially as claimed above but fail to disclose the rubber to be a neoprene compound having a 550% at break and 115% diameter stretchability without 10% change in the properties of the gaiter rubber (this is the case due to the bellow to be made from neoprene rubber compound). IBM discloses a bellow that is made of neoprene

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rubber compound (IBM discloses the bellow to be made from the same material as claimed by the applicant, hence IBM bellows has neoprene rubber compound having 550% at break and 115% diameter stretchability without 10% change in the properties of the gaiter rubber). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the synthetic rubber by a neoprene rubber compound as taught by IBM, to provide uniform thickness or better manufacturing characteristic or flexibility or stretchability (inherent to neoprene and also see IBM).

14. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward.

Hayward discloses the claimed invention except the said one or both end portions are radially compressible to a compressed diameter which is 98% of the uncompressed respective end portion diameter. Discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of choice in design. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the said one or both end portions are radially compressible to a compressed diameter which is 98% of the uncompressed respective end portion diameter, as a matter of design choice. Furthermore Hayward discloses the bellows to be compressible.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Martin, Boge, Goodman, Bircann et al, Umeno, Hayward et al and DeLeeuw et al.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is (703) 308-8495. The examiner can normally be reached on Monday through Friday from 7:30 PM to 4:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached on (703) 309-3179.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168. Technology Center 3600 Customer Service is available at 703-308-1113. General Customer Service numbers are at 800-786-9199 or 703-308-9000. Fax Customer Service is available at 703-872-9325.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: 703-872-9326, for formal communications for entry before Final action: or,
703-872-9327, for formal communications for entry after Final action.

For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**" and fax to: 703-746-3814.

Hand-delivered responses should be brought to Crystal Park Five, 2451 Crystal Drive, Arlington, Virginia, Seventh Floor (Receptionist suite adjacent to the elevator lobby).

VP
October 2, 2003

A handwritten signature in black ink, appearing to read 'Vishal Patel', is written over a horizontal line.

Vishal Patel
Patent Examiner
Tech. Center 3600